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(54) Title: MUTANT SODIUM CHANNEL $Na_v1.7$ AND METHODS RELATED THERETO

(57) Abstract: Described are mutant $Na_v1.7$ sodium channel alpha-subunits and nucleic acid sequences encoding such mutants. Further described are methods for characterizing a nucleic acid sequence that encodes a Na_v1 sodium channel alpha-subunit, methods for determining a $Na_v1.7$ haplotype, methods for determining a subject's predisposition to a neurologic disorder associated with a sodium channel mutation, and methods of identifying a compound that modulates mutant $Na_v1.7$ sodium channels. Other materials, compositions, articles, devices, and methods relating to mutant $Na_v1.7$ sodium channels are also described herein.